

REMARKS

Reconsideration of the above-referenced application in view of the following remarks is respectfully requested.

Claims 1-6, 10-12, 14, 17, and 26-32 are pending in this application.

The Examiner has asserted that Applicant entered new matter by adding Claim 28 in the last response. Specifically, it is the phrase "raised point of said wire is supported by mold compound" that is contested. Support for the phrase may be found in the specification on page 12 in the paragraph bridging pages 11 and 12, wherein it is stated that

"The wire 50 may also be strung so that it forms a raised area or peak 56 in the middle of the wire segment 50 before the second end is bonded to the conductive pad 40. For example, the peaked shape formed in Figure 16 may be formed. After the wire is bonded at both ends, the fixture may be dipped into a mold compound that fills in the area 58 defined by the wire segment 50. This will give the side of the nest constructed with the wire rigidity sufficient to withstand the forces associated with loading a solder ball into the interconnection nest [emphasis added]."

Applicant respectfully submits that this passage from the specification clearly supports the claim language, in which case the newly added claim cannot constitute new matter.

Claims 1-6, 10-12, 17-27, 29, 30, and 32 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wark, et al. (U.S. Patent No. 5,929,521). Claim 1 includes the feature of "at least one conductive member formed on each of said multiplicity of conductive pads and extending away from said working surface, said at least one conductive member comprising a wire bonder stud bump."

Wark does not disclose or suggest a conductive member comprising a wire bonder stud bump. Therefore, Applicant respectfully submits that Claim 1 is patentable over Wark. Claims 2-6 and 10-12 depend from Claim 1 and are therefore patentable over Wark for at least the reasons presented above.

Claim 17 includes the feature of "at least three conductive lengths of wire extending away from said working surface bonded to a selected one of said multiplicity of conductive pads by a wire bonding machine to form an interconnecting nest." Wark does not teach or suggest such a feature. Therefore, Applicant respectfully submits that Claim 17 is patentable over Wark.

Claim 26 includes the feature of "at least one conductive member formed on each of said multiplicity of conductive pads and extending away from said working surface, said at least one conductive member comprising a wire having first and second ends bonded to said conductive pad." Wark does not teach or suggest such a feature. Therefore, Applicant respectfully submits that Claim 26 is patentable over Wark. Claims 27 and 28 depend from Claim 26 and are therefore patentable over Wark for at least the reasons presented above for that claim.

Claim 29 includes the feature of "a plurality of wire bonder stud bumps on at least one of said plurality of pads, whereby said stud bumps form a nest for contacting one of said solder ball interconnects." Wark does not teach or suggest such a feature. Therefore, Applicant respectfully submits that Claim 29 is patentable over Wark. Claims 30-32 depend from Claim 29 and are therefore patentable over Wark for at least the reasons presented above for that claim.

The crux of the rejection of these claims appears to be the Examiner's reliance upon the inherency of certain of the claimed features in Wark. However, as indicated previously, Wark is completely unrelated to wire bonding. In fact, in the extensive list of methods Wark mentions for forming the projections at col. 4, lines 40-49, wirebonding does not appear, although many other techniques are listed (e.g. subtractive, additive, stenciling, printing, stamping, electrochemical or electroless plating, adhesives, and bonding of preformed contact pads having projections thereon). Hence, whatever projections that Wark forms cannot be

wire bonder stud bumps. The instant specification (e.g. page 9) makes clear the advantage of the use of wire bonder stud bumps as probe contacts and takes pains to point out that the stud bumps referred to throughout the specification have particular characteristics as a result of being formed with a wirebonder (i.e. shape, low cost, flexibility, precision), all of which are advantages over the type of projection formed in Wark with a process that relies on expensive mask, plating, and etch processes. Therefore, Applicant respectfully requests that the rejections be reconsidered and withdrawn.

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wark in combination with King, et al. (U.S. Patent No. 6,208,027). Claim 14 includes the feature "wherein one or more of said conductive members comprise wire bonder stud bumps bonded on top of another wire bonder stud bump." Neither Wark nor King disclose or suggest the use of wire bonder stud bumps. Therefore, Applicant submits that Claim 14 is patentable over the combination of those references.

Claim 31 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Wark in combination with Steitz, et al. (U.S. 5,358,826). Claim 31 includes the feature "wherein said stud bump and said wire are gold." Wark does not disclose or suggest wire bonder stud bumps or wires. Steitz's teachings do not cure the deficiencies of Wark. Therefore, Applicant submits that Claim 31 is patentable over Wark in view of Steitz/

In view of the above, Applicant respectfully requests the entry of this amendment, the withdrawal of the Examiner's rejections, and allowance of Claims 1-6, 10-12, 14, 17, and 26-32. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael K. Skrehot', written in a cursive style.

Michael K. Skrehot
Reg. No. 36,682

Texas Instruments Incorporated
P.O. Box 655474, M/S 3999
Dallas, TX 75265
Phone: 972 917-5653
Fax: 972 917-4418